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(74) Agent: DAUTZENBERG, Jozef, Marie, Andreas; DSM  
Intellectual Property, P.O. Box 9, NL-6160 MA Geleen  
(NL).

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(71) Applicant (for all designated States except US): DSM IP  
ASSETS B.V. [NL/NL]; Het Overloon 1, NL-6411 TE  
Heerlen (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): RAEMAK-  
ERS-FRANKEN, Petronella, Catharina [NL/NL];  
Europalaan Zuid 124, NL-6021 KJ Budel (NL). NOSSIN,  
Petrus, Martinus, Matheus [NL/NL]; Schoor 11,  
NL-6031 SC Nederweert (NL). BRANDTS, Paul, Maria  
[NL/NL]; Vredeslaan 4, NL-6141 BM Limbricht (NL).  
WUBBOLTS, Marcel, Gerhardus [NL/NL]; Prevotlaan  
9, NL-6132 BM Sittard (NL). PEETERS, Wijnand,  
Peter, Helena [NL/NL]; Vlodropstraat 2, NL-5993 CX  
Maasbree (NL). ERNSTE, Sandra [NL/NL]; Hoofdstraat  
215, NL-6372 CV Landgraaf (NL). DE WILDEMAN,  
Stefaan, Marie, André [BE/BE]; Eenmeilaan 229 bus  
101, B-30101 Kessel-Lo (BE). SCHUERMANN, Martin  
[DE/DE]; Fliederweg 7, 52428 Jülich (DE).

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(54) Title: BIOCHEMICAL SYNTHESIS OF 6-AMINO CAPROIC ACID

(57) Abstract: The invention relates to biochemical synthesis of 6-amino caproic acid from 6-amino-hex-2-enoic acid compound or from 6-amino-2-hydroxyhexanoic acid, by treatment with an enzyme having  $\alpha,\beta$ -enoate reductase activity towards molecules containing an  $\alpha,\beta$ -enoate group and a primary amino group. The invention also relates to processes for obtaining suitable genetically engineered cells for being used in such biotransformation process, and to precursor fermentation of 6-amino caproic acid from intermediates leading to 6-amino caproic acid. Finally, the invention relates to certain novel biochemically produced compounds, namely 6-amino-hex-2-enoic acid, 6-amino-hexanoic acid, as well as to caprolactam produced therefrom and to nylon-6 and other derivatives produced from such biochemically produced compounds or caprolactam.

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